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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/877,160	06/08/2001	Hsu Ching-Hsaing	12774-003001	1015

26161 7590 12/19/2003

FISH & RICHARDSON PC
225 FRANKLIN ST
BOSTON, MA 02110

EXAMINER	
HUYNH, PHUONG N	

ART UNIT	PAPER NUMBER
1644	

DATE MAILED: 12/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/877,160	CHING-HSAING ET AL.	
	Examiner	Art Unit	
	Phuong Huynh	1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *Three* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 September 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *19,20,44 and 45* is/are pending in the application.

4a) Of the above claim(s) *44 and 45* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *9/29/03* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Claims 19-20 and 44-45 are pending.

2. Newly submitted Claims 44-45 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The method of decreasing the production of IgE in a subject in claims 44-45 differs with respect to the method steps as set forth in claim 44. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 44-45 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

3. Claims 19-20 are being acted in this Office Action.

4. In view of the amendment filed 9/29/2003, the following objection and rejections remain.

5. The disclosure stands objected to because of the following informality: incorporation of subject matter into the patent application by reference to a hyperlink and/or other forms of browser-executable code is considered to be an improper incorporation by reference. See MPEP 608.01(p), paragraph I regarding incorporation by reference. Therefore the embedded hyperlinks and/or other forms of browser-executable code disclosed on pages 5, line 3 of the instant specification are impermissible and require deletion. Where the hyperlinks and/or other forms of browser-executable codes are part of applicant's invention and are necessary to be included in the patent application in order to comply with the requirements of 35 U.S.C. 112, first paragraph, and applicant does not intend to have these hyperlinks be active links, then this objection will be withdrawn and the Office will disable these hyperlinks when preparing the patent text to be loaded onto the PTO web database. Appropriate action is required.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 103(a) that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. This application currently names joint inventors. In considering Patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat No 5,951,984 (of record) in view of Sato *et al* (of record, Immunology 95(2): 193-9, Oct 1998; PTO 892), Lin *et al* (of record, J Allergy Clin Immunol 94: 989-96, 1994; PTO 892), US Pat No 6,413,738 (of record, July 2002, PTO 892) and Wall *et al* (of record, Proc Natl. Sci USA 88: 1696-1700, 1991; PTO 892).

The '984 patent teaches a method to induce tolerance in the subject by administering orally a milk composition comprising various non-milk allergen such as the white of the eggs, soybean protein, pollen, house dust mite, and tick (See column 7, lines 55-58, and lines 7-10, column 9, lines 65-66, claims 1-4 of '984 patent, in particular). The '984 patent further teaches in case when mother's milk is not available, commercial milk preparations for allergic disease may be used (see column 7, lines 56-58, in particular).

The claimed invention in claim 19 differs from the teachings of the references only that the method wherein the milk composition comprising the allergen Der p5 comprising SEQ ID NO: 1 and is obtained from a transgenic animal that expresses Derp5 in mammary tissue.

The claimed invention in claim 20 differs from the teachings of the references only that the method of decreasing the production of IgE in a subject exposed to an allergen, the method comprising orally administering t a subject a milk composition comprising a heterologous non-

milk Derp5 allergen that comprises SEQ ID NO: 1, wherein the milk composition is obtained from a transgenic animal that expresses Derp5 in mammary tissue.

Sato *et al* teach a method of treating airway inflammation and hyperactivity and decrease the allergen specific IgE production to a subject such as mice by administering orally a composition comprising a non-milk allergen such as dust mite extract from *Dermatophagoides pternyssinus* (Dp) to induce oral tolerance that suppresses allergen-specific IgE production in the subject such as sensitized mice upon subsequent exposure to the allergen (See abstract, in particular). The reference allergen is from dust mite, which is of an insect. Sato *et al* teach that oral feeding of allergen can induce oral tolerance that can modulate the production of allergen-specific IgE antibodies in both naïve and sensitized animals (See abstract, Discussion, in particular).

Lin *et al* teach dust mite allergen from *Dermatophagoides pternyssinus* Der p5 which is identical to the claimed SEQ ID NO: 1 (See Fig 2, in particular) and is evidence on page 9, line 3 of the specification.

The '738 patent teaches oral administration of dust mite allergen such as Der f VII from *Dermatophagoides farinae* and/or Der p VII from *Dermatophagoides pternyssinus* can desensitize the subject to the allergic response to the reference dust mite allergens (See column 17, lines 42-56, column 18, line 7, column 19, lines 14-17, in particular). The '738 patent teaches high doses of allergen generally produce the best results during immunotherapy such as best symptom relief (See column 20, line 44-46, in particular).

Wall *et al* teach that a method of producing any pharmacologically active protein of interest in the mammary glands of transgenic mammal such as swine (pig) and it is possible to produce high levels of foreign protein milk of farm animals (See abstract, in particular). Wall *et al* teach that large quantities of milk would be easily obtained from dairy animals, however, the pig can carry 5 times as many fetuses as a cow, doe or ewe which requires one-sixth the number of animals used for obtaining a transgenic pig and less than half of the time in terms of recovery of injectable ova per donor gilt (See page 1696, column 2, first paragraph, in particular).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the allergen such as egg protein, soybean protein, pollen or tick as taught by the '984 patent for the *Dermatophagoides pternyssinus* Der p 5 allergen from dust mite comprising SEQ ID NO: 1 that is identical to the claimed SEQ ID NO: 1 as taught by Lin et al by expressing said Der p5 allergen in the milk of a transgenic animal as taught by Wall et al.

From the combined teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention.

One having ordinary skill in the art would have been motivated to do this because Sato *et al* teach that oral feeding of allergen can induce oral tolerance that can modulate the production of allergen-specific IgE antibodies in both naïve and sensitized animals (See abstract, Discussion, in particular). Lin *et al* teach that Der p5 is another one of dust mite allergens from *Dermatophagoides pternyssinus* Der p5 (See Fig 2, in particular). The '738 patent teaches high doses of allergen generally produce the best results during immunotherapy such as best symptom relief (See column 20, line 44-46, in particular). Wall *et al* teach that large quantities of milk would be easily obtained from dairy animals, however, the pig can carry 5 times as many fetuses as a cow, doe or ewe which requires one-sixth the number of animals used for obtaining a transgenic pig and less than half of the time in terms of recovery of injectable ova per donor gilt (See page 1696, column 2, first paragraph, in particular).

Applicants' arguments filed 9/29/03 have been fully considered but are not found persuasive.

Applicants' position is that (1) None of cited reference demonstrated that a Der p5 protein when transgenic produced in a mammary gland is in a form suitable for inducing allergenic tolerance when administered orally. (2) Sato does not teach the dust mite extract contains a substantial amount of Der p5 in a form that resembles the transgenically produced as required by claim 20 as amended. (3) Lin does not teach oral administration of a milk that includes Der p5 when transgenic produced in a mammary gland is in a form suitable for inducing allergenic tolerance when administered orally. (4) the '984 patent describes an antigen-containing preparation and contemplates that milk proteins and protein as components of an antigen-containing preparation and the '984 patent does not demonstrate that a protein nor a Der p5 protein in particular when transgenic produced in a mammary gland is in a form suitable for inducing allergenic tolerance when administered orally. (5) The '345 patent discusses how an allergen can be administered to a milk producing animal as protein. The milk-producing animal then apparently processes allergen administered to the animal into a form that is secreted in the milk of the animal. Since the allergen is administered to the mammal as a protein rather then using a transgene that directs expression to the mammary gland, the '345 patent does not teach whether the protein (nor a Der p5 protein) transgenically produced in the mammary gland of a mammal would be in a suitable form for inducing immunological tolerance. (6) Wall describes

the ability of transgenic animal to produce with foreign proteins. Wall does not teach whether a protein (nor Der p5 protein in particular) transgenic produced in a mammary gland is in a form suitable for inducing allergenic tolerance when administered orally.

In response, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. In re Keller , 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., Inc. , 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). See MPEP 2145.

In contrast to applicant's assertion that none of the reference provide any expectation of success, the '984 patent teaches a method to induce tolerance in the subject by administering orally a milk composition comprising various non-milk allergen such as the white of the eggs, soybean protein, pollen, house dust mite, and tick (See column 7, lines 55-58, and lines 7-10, column 9, lines 65-66, claims 1-4 of '984 patent, in particular). Sato *et al* teach a method of treating airway inflammation and hyperactivity and decrease the allergen specific IgE production to a subject such as mice by administering orally a composition comprising a non-milk allergen such as dust mite extract from *Dermatophagoides pternyssinus* (Dp) to induce oral tolerance that suppresses allergen-specific IgE production in the subject such as sensitized mice upon subsequent exposure to the allergen (See abstract, in particular). Lin *et al* teach the specific dust mite allergen from *Dermatophagoides pternyssinus* Der p5 which is identical to the claimed SEQ ID NO: 1 (See Fig 2, in particular). The '738 patent teaches that high doses of allergen generally produce the best results during immunotherapy such as best symptom relief (See column 20, line 44-46, in particular) and the teachings Wall et al indicating success in generating large quantity of protein of interest in the mammary gland in the transgenic animal and protein of interested is secreted in the form of milk. The success of oral tolerance against various allergen in the form of milk and large quantity of allergen that is required would have led one of ordinary skill in the art at the time the invention was made to combine the references to solve a well known problem in the art. The strongest rationale for combining reference is a recognition, expressly or implicitly in the prior art or drawn from a convincing line of reasoning based on established scientific principles or legal precedent that some advantage or expected beneficial result would have been produced by their combination In re Sernaker 17 USPQ 1, 5-6 (Fed. Cir. 1983) see MPEP 2144.

9. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat No 5,814,345 (Sept 1998, PTO 892) in view of Sato *et al* (Immunology 95(2): 193-9, Oct 1998; PTO 892), Lin *et al* (J Allergy Clin Immunol 94: 989-96, 1994; PTO 892), US Pat No 6,413,738 (July 2002, PTO 892) and Wall *et al* (Proc Natl. Sci USA 88: 1696-1700, 1991; PTO 892).

The '345 patent teaches a method of treating allergic individual with a milk composition (oral vaccine) comprising a heterologous non-milk allergen such as dust mite to induce tolerance to said allergen (See entire document, column 8, lines 14-23, column 10, Table, in particular). the '345 patent teaches that oral consumption of milk obtained from immunized animal with any one specific allergen or a mixture of allergens desensitize the subject who ingested the milk composition; the subject acquire tolerance to such allergen (See column 5, lines 19-29, column 5, lines 66-67, in particular). The '345 patent teaches that the advantages of oral desensitization are that it can be self administered, less painful and less expensive than vaccines which must be injected (See column 5, lines 24-26, in particular).

The claimed invention in claim 19 differs from the teachings of the references only that the method wherein the milk composition comprising the allergen Der p5 comprising SEQ ID NO: 1 and is obtained from a transgenic animal that expresses Derp5 in mammary tissue.

The claimed invention in claim 20 differs from the teachings of the references only that the method of decreasing the production of IgE in a subject exposed to an allergen, the method comprising orally administering t a subject a milk composition comprising a heterologous non-milk Derp5 allergen that comprises SEQ ID NO: 1, wherein the milk composition is obtained from a transgenic animal that expresses Derp5 in mammary tissue.

Sato *et al* teach a method of treating airway inflammation and hyperactivity and decrease the allergen specific IgE production to a subject such as mice by administering orally a composition comprising a non-milk allergen such as dust mite extract from *Dermatophagoides pternyssinus* (Dp) to induce oral tolerance that suppresses allergen-specific IgE production in the subject such as sensitized mice upon subsequent exposure to the allergen (See abstract, in particular). The reference allergen is from dust mite, which is of an insect. Sato *et al* teach that oral feeding of allergen can induce oral tolerance that can modulate the production of allergen-specific IgE antibodies in both naïve and sensitized animals (See abstract, Discussion, in particular).

Lin *et al* teach dust mite allergen from *Dermatophagoides pternyssinus* Der p5 which is identical to the claimed SEQ ID NO: 1 (See Fig 2, in particular).

The '738 patent teaches oral administration of dust mite allergen such as Der f VII from *Dermatophagoides farinae* and/or Der p VII from *Dermatophagoides pternyssinus* can desensitize the subject to the allergic response to the reference dust mite allergens (See column 17, lines 42-56, column 18, line 7, column 19, lines 14-17, in particular). The '738 patent teaches high doses of allergen generally produce the best results during immunotherapy such as best symptom relief (See column 20, line 44-46, in particular).

Wall *et al* teach that a method of producing any pharmacologically active protein of interest in the mammary tissues such as the mammary glands of transgenic mammal such as swine (pig) and it is possible to produce high levels of foreign protein in the milk of farm animals (See abstract, in particular). Wall *et al* teach that large quantities of milk would be easily obtained from dairy animals, however, the pig can carry 5 times as many fetuses as a cow, doe or ewe which requires one-sixth the number of animals used for obtaining a transgenic pig and less than half of the time in terms of recovery of injectable ova per donor gilt (See page 1696, column 2, first paragraph, in particular).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the mite allergen as taught by the '345 patent for the mite allergen such as *Dermatophagoides pternyssinus* allergen comprising SEQ ID NO: 1 which is identical to the claimed SEQ ID NO: 1 as taught by Lin et al by expressing said Der p5 allergen in the milk of a transgenic animal as taught by Wall et al for a method of treating allergy by decreasing the production of IgE in a subject as taught by Sato *et al* and the '738 patent. From the combined teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention.

One having ordinary skill in the art would have been motivated to do this because Sato *et al* teach that oral feeding of allergen can induce oral tolerance that can modulate the production of allergen-specific IgE antibodies in both naïve and sensitized animals (See abstract, Discussion, in particular). Lin *et al* teach that Der p5 is another one of dust mite allergens from *Dermatophagoides pternyssinus* Der p5 (See Fig 2, in particular). The '345 patent teaches that the advantages of oral desensitization are it can be self administered, less painful and less expensive than vaccines which must be injected (See column 5, lines 24-26, in particular). The '738 patent teaches high doses of allergen generally produce the best results during immunotherapy such as best symptom relief (See column 20, line 44-46, in particular). Wall *et al* teach that large quantities of protein of interest in the milk would be easily obtained from dairy animals, however,

the pig can carry 5 times as many fetuses as a cow, doe or ewe which requires one-sixth the number of animals used for obtaining a transgenic pig and less than half of the time in terms of recovery of injectable ova per donor gilt (See page 1696, column 2, first paragraph, in particular).

Applicants' arguments filed 9/29/03 have been fully considered but are not found persuasive.

Applicants' position is that (1) None of cited reference demonstrated that a Der p5 protein when transgenic produced in a mammary gland is in a form suitable for inducing allergenic tolerance when administered orally. (2) Sato does not teach the dust mite extract contains a substantial amount of Der p5 in a form that resembles the transgenically produced as required by claim 20 as amended. (3) Lin does not teach oral administration of a milk that includes Der p5 when transgenic produced in a mammary gland is in a form suitable for inducing allergenic tolerance when administered orally. (4) the '984 patent describes an antigen-containing preparation and contemplates that milk proteins and protein as components of an antigen-containing preparation and the '984 patent does not demonstrate that a protein nor a Der p5 protein in particular when transgenic produced in a mammary gland is in a form suitable for inducing allergenic tolerance when administered orally. (5) The '345 patent discusses how an allergen can be administered to a milk producing animal as protein. The milk-producing animal then apparently processes allergen administered to the animal into a form that is secreted in the milk of the animal. Since the allergen is administered to the mammal as a protein rather then using a transgene that directs expression to the mammary gland, the '345 patent does not teach whether the protein (nor a Der p5 protein) transgenically produced in the mammary gland of a mammal would be in a suitable form for inducing immunological tolerance. (6) Wall describes the ability of transgenic animal to produce with foreign proteins. Wall does not teach whether a protein (nor Der p5 protein in particular) transgenic produced in a mammary gland is in a form suitable for inducing allergenic tolerance when administered orally.

In response, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. In re Keller , 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., Inc. , 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). See MPEP 2145.

In contrast to applicant's assertion that none of the reference provide any expectation of success, the '345 patent teaches a method of treating allergic individual with a milk composition (oral vaccine) comprising a heterologous non-milk allergen such as dust mite to induce tolerance

to said allergen (See entire document, column 8, lines 14-23, column 10, Table, in particular). the '345 patent teaches that oral consumption of milk obtained from immunized animal with any one specific allergen or a mixture of allergens desensitize the subject who ingested the milk composition; the subject acquire tolerance to such allergen (See column 5, lines 19-29, column 5, lines 66-67, in particular). The '345 patent teaches that the advantages of oral desensitization are that it can be self administered, less painful and less expensive than vaccines which must be injected (See column 5, lines 24-26, in particular). Sato *et al* teach a method of treating airway inflammation and hyperactivity and decrease the allergen specific IgE production to a subject such as mice by administering orally a composition comprising a non-milk allergen such as dust mite extract from *Dermatophagoides pternyssinus* (Dp) to induce oral tolerance that suppresses allergen-specific IgE production in the subject such as sensitized mice upon subsequent exposure to the allergen (See abstract, in particular). Lin *et al* teach the specific dust mite allergen from *Dermatophagoides pternyssinus* Der p5 which is identical to the claimed SEQ ID NO: 1 (See Fig 2, in particular). The '738 patent teaches high doses of allergen generally produce the best results during immunotherapy such as best symptom relief (See column 20, line 44-46, in particular) and the teachings Wall et al indicate the success in generating large quantity of protein of interest in the mammary gland in the transgenic animal and protein of interested is secreted in the form of milk. The success of oral tolerance against various allergen in the form of milk and large quantity of allergen that is required would have led one of ordinary skill in the art at the time the invention was made to combine the references to solve a well known problem in the art. The strongest rationale for combining reference is a recognition, expressly or implicitly in the prior art or drawn from a convincing line of reasoning based on established scientific principles or legal precedent that some advantage or expected beneficial result would have been produced by their combination In re Sernaker 17 USPQ 1, 5-6 (Fed. Cir. 1983) see MPEP 2144.

10. No claim is allowed.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to "Neon" Phuong Huynh whose telephone number is (703) 308-4844. The examiner can normally be reached Monday through Friday from 9:00 am to 6:00 p.m. A message may be left on the examiner's voice mail service. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached on (703) 308-3973. Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 1600 receptionist whose telephone number is (703) 308-0196.

13. Papers related to this application may be submitted to Technology Center 1600 by facsimile transmission. Papers should be faxed to Technology Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CM1 Fax Center telephone number is (703) 305-7401.

Phuong N. Huynh, Ph.D.
Patent Examiner
Technology Center 1600
December 15, 2003

CHRISTINA CHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600